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2012 Reilly Center Forum

Erik M. Conway, Ph.D.

Jet Propulsion Laboratory, California Institute of Technology



Dreaming of Mars Sample Return, from Viking to the Mars Science Laboratory

Wednesday, August 29, 2012

3:15pm

200 McKenna Hall

Planetary scientists have long wanted to bring samples of other planets back to Earth for analysis. The lunar samples returned by the Apollo missions to the Moon are the totemic examples because they have been the subject of research for decades since their return. All current “samples” of Mars that exist on Earth are meteorites blasted off Mars by asteroid impacts. Despite this, the desire for sample return has driven technology development since the 1976 Viking landings on Mars. Drawing on his recently completed history of Mars exploration, Dr. Erik Conway will discuss the way scientists’ dreams of returning bits of Mars to Earth have played out at Jet Propulsion Laboratory in design studies, technology programs, and in flight projects since the end of the Viking missions. This narrative will be paralleled with a discussion of NASA's internal schizophrenia, between its identities as a scientific agency and an agent of human expansion into the solar system. This has led to ongoing competition for leadership and funding between its scientific and human exploration programs that has made achievement of sample return impossible to date and currently imperils planetary science as a whole.

Erik Conway, PhD, is a historian at the NASA Jet Propulsion Laboratory, California Institute of Technology. He has recently finished a book manuscript on the exploration of Mars. He is the author of Atmospheric Science at NASA: A History (2008), Blind Landings: Low-Visibility Operations in American Aviation, 1918-1958 (2006), and High-Speed Dreams: NASA and the Technopolitics of Supersonic Transportation, 1945-1999 (2005). He is also co-author of Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming (2010) with Naomi Oreskes.

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